

Maryland Historical Trust

Maryland Inventory of Historic Properties Number: AA-2120.

Name: #2046 MD 173 over Rock Creek

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridged received the following determination of eligibly.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended _____	Eligibility Not Recommended <u>X</u>
Criteria: <u> </u> A <u> </u> B <u> </u> C <u> </u> D Considerations: <u> </u> A <u> </u> B <u> </u> C <u> </u> D <u> </u> E <u> </u> F <u> </u> G <u> </u> None	
Comments: _____ _____ _____	
Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

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MARYLAND INVENTORY OF HISTORIC PROPERTIES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION
MARYLAND HISTORICAL TRUST

MHT NO. AA-2120

NAME AND SHA NO.: 2046

LOCATION

Road Name and Number: MD 173 over Rock Creek

City/Town: Riviera Beach (Fort Smallwood) X vicinity

County: Anne Arundel

Ownership: X State County Municipal Other

Bridge projects over: Road Railway X Water Land

Is bridge located within designated district?: yes X no

 NR listed district NR determined eligible district

 locally designated other

Name of District

BRIDGE TYPE

 Timber Bridge

 Beam Bridge Truss-Covered Trestle Timber-and-Concrete

 Stone Arch Bridge

 Metal Truss Bridge

 Moveable Bridge

 Swing Bascule Single Leaf Bascule Multiple Leaf

 Vertical Lift Retractable Pontoon

 Metal Girder

 Rolled Girder Rolled Girder Concrete Encased

 Plate Girder Plate Girder Concrete Encased

 Metal Suspension

 Metal Arch

 Metal Cantilever

X Concrete

 Concrete Arch Concrete Slab X Concrete Beam Rigid Frame

 Other Type Name

DESCRIPTION

Describe the Setting:

Bridge #2046 carries MD 173 over Rock Creek near Riviera Beach in Anne Arundel County. This area falls within Maryland's Tidewater or Coastal Plain physiographic region. MD 173 runs in a northwest to southeast direction at this location. Rock Creek flows in a roughly southwest to northeast direction. The bridge is situated south of Bridge #2045 and north of MD 177. There are several dwellings located just east of the bridge.

**Describe the Superstructure and Substructure:
(Discuss points identified in Context Addendum, Section C)**

Bridge #2046 was built in 1932 to conform to the 1932 standard dimensions for a 40'-0" bridge. The structure is a single-span, reinforced concrete girder bridge with concrete wingwalls and concrete abutments. The concrete wingwalls and abutments were originally constructed as single units, and the exterior girders were cast directly against the cheek walls. The bridge has a span length of 40 feet and a clear roadway width of 27 feet; it carries two lanes of traffic over Rock Creek. Both approaches to the structure occur on a downhill grade. The bridge has a bituminous wearing surface which measures approximately 3" above the concrete deck.

A 1995 inspection report described the poor condition of this bridge. Specifically, the girders display minor spalling of girder 1, a 2-foot-long crack along the full thickness of the beam and exposed, rusted re-steel in girder 5, and a 6-foot-long patched area on girder 2 that has failed and is beginning to spall. The north abutment shows a full-height 1/16-inch open vertical crack. The most severe problem is visible in the southeast wing wall which has pulled away from the abutment leaving a 4-foot wide gap between the cheek wall and fascia girder. This deficiency has been evident for over 25 years with no apparent change, thus bridge inspectors are continually monitoring this element of the bridge.

A survey of historic concrete beam bridges undertaken by the Maryland State Highway Administration in the Fall of 1995 identified 113 bridges of that type located throughout the state. Slightly more than two-thirds (76) of that total were single-span bridges.

Discuss major alterations:

Between 1985 and 1993, the original open balustrades were completely replaced with solid concrete parapets. Documentary evidence indicates that no other repairs or major alterations have been undertaken on the bridge.

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HISTORY

When Built: 1932

Why Built: Statewide road improvement programs and local transportation needs

Who Built: State Roads Commission, contract #AA 118

Who Designed: Unknown

Why Altered: The bridge was altered to correct deterioration of the parapets; the original open balustrades were replaced with solid concrete parapets between 1985 and 1993.

Was this bridge built as part of an organized bridge building campaign?: No

SURVEYOR ANALYSIS

This bridge may have NR significance for association with:

☐ A (Events) ☐ B (Person) ☐ C (Engineering/Architectural Character)

Was this bridge constructed in response to significant events in Maryland or local history?

Road improvements in Anne Arundel County were fueled by several events occurring during the early twentieth century. First, the Good Roads Movement, which began in the last decade of the nineteenth century, aimed to improve primary roads throughout the state as well as multiple connecting roads between counties. As the movement progressed, numerous existing roads were widened, straightened, or graded, and many new bridges were built to carry the rebuilt roads. Second, rapidly increasing automobile, truck, and bus traffic also fueled the replacement of existing narrow and weak bridges with wider and stronger concrete structures, many of which were built according to standardized specifications and plans developed by the State Roads Commission (SRC). Third, the State Roads Commission established district engineering offices during the 1910s to aid in intrastate road development, and established a separate bridge department in 1920. This fostered construction of many concrete bridges throughout the state. In the 1920s, the SRC emphasized improving the safety and comfort of primary routes while developing secondary networks and feeder roads. By the 1930s, bridges that were originally deemed adequate had become unacceptable for carrying modern traffic loads and many new structures were built as a result.

When the bridge was built, and/or given a major alteration, did it have a significant impact on the growth and development of the area?

Bridge #2046 participated in the general trend toward upgrading state roads and bridges and improving intrastate access.

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Is the bridge located in an area which may be eligible for historic designation, and would the bridge add or detract from the historic and visual character of the possible district?

No, the bridge is not located in an area which is eligible for historic designation.

Is the bridge a significant example of its type?

No, the bridge is not a significant example of its type.

Does the bridge retain integrity of the important elements described in the Context Addendum?

No, the bridge does not retain integrity of the primary character defining elements of a concrete beam bridge. The character-defining elements for the superstructures of concrete beam bridges are the slab, the longitudinal beams, and the parapet or railing when integral. For the substructure, the character-defining elements are the abutments, piers, and wing walls. The repairs to the wingwalls and abutments as well as the replacement of the original parapets have compromised the integrity of the original structure.

Is the bridge a significant example of the work of the manufacturer, designer, and/or engineer, and why?

No, this structure is not a significant example of the work of the State Roads Commission.

Should this bridge be given further study before significance analysis is made, and why?

No, this structure should not be given further study. Previous alterations place its integrity in doubt.

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1994 *Historic Bridges in Maryland: Historic Context Report.*
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State Highway Administration
Bridge Inspection Reports. On file 707 North Calvert Street, Baltimore.

As-Built Drawings. On file 707 North Calvert Street, Baltimore.

State Roads Commission of Maryland
1958 *A History of Road Building in Maryland.* Baltimore.

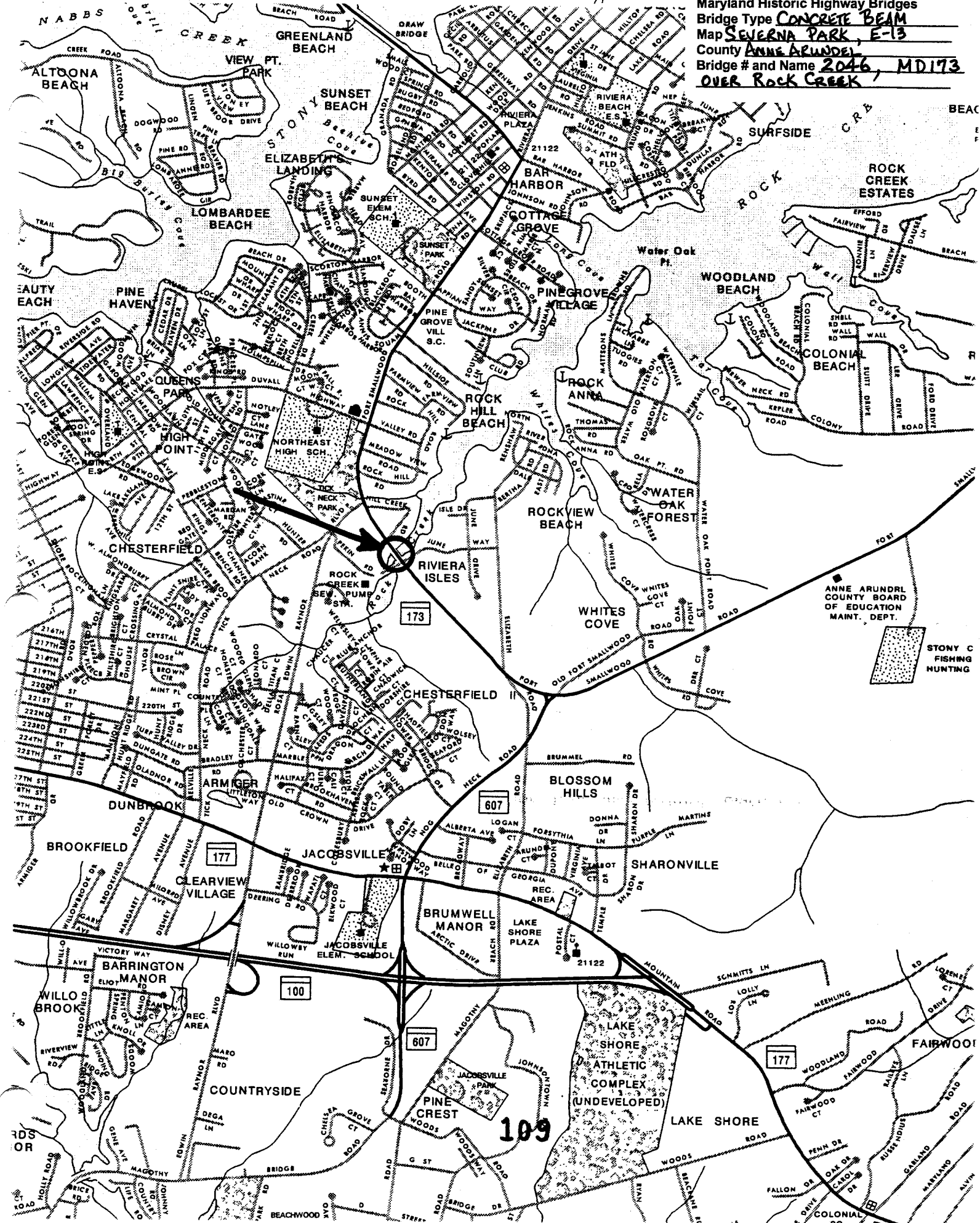
SURVEYOR INFORMATION

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AA-2120

Maryland Historic Highway Bridges
 Bridge Type CONCRETE BEAM
 Map SEVERNA PARK, E-13
 County ANNE ARUNDEL
 Bridge # and Name 2046, MD173
OVER ROCK CREEK





Inventory # AA-2120

Name 2046- MD 173 OVER ROCK CREEK

County/State ANNE ARUNDEL COUNTY/MD

Name of Photographer WALLY KING

Date 1/95

Location of Negative SHA

Description EAST APPROACH LOOKING WEST

Number 9 of 24 1 of 4



Inventory # AA-2120

Name 2046- MD 173 OVER ROCK CREEK

County/State ANNE ARUNDEL COUNTY/MD

Name of Photographer WALLY KING

Date 1/95

Location of Negative S+1A

Description WEST APPROACH LOOKING EAST

Number ~~10 of 24~~ 2 of 4



Inventory # AA-2120

Name 2046 MD 173 OVER ROCK CREEK

County/State ANNE ARUNDEL COUNTY/MD

Name of Photographer WALLY KING

Date 1/95

Location of Negative SHA

Description NORTH ELEVATION

Number ~~11 of 24~~ 3 of 4



Inventory # AA-2120

Name 2046 MD 173 OVER ROCK CREEK

County/State ANNE ARUNDEL COUNTY/MD

Name of Photographer WALLY KING

Date 1/95

Location of Negative SHA

Description SOUTH ELEVATION

Number ~~12~~ of ~~24~~ 4 of 4